

LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES



**OFFICE OF FISHERIES
INLAND FISHERIES SECTION**

PART VI -A

WATERBODY MANAGEMENT PLAN SERIES

BAYOU DESIARD

LAKE HISTORY & MANAGEMENT ISSUES

CHRONOLOGY

DOCUMENT SCHEDULED TO BE UPDATED ANNUALLY

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LAKE HISTORY

GENERAL INFORMATION

Parish

Ouachita

Date Reservoir Formed

1935 – Construction of the Ouachita River Levee System separated Bayou DeSiard from the Ouachita River.

Impoundment

Bayou DeSiard originally formed the lower end of a historical channel of the Arkansas River, which flowed through what is now Bayou Bartholomew. It is now impounded at its confluence with the Ouachita River by a levee and where it diverted from Bayou Bartholomew (now Bartholomew Lake) by an earthen dam. Bayou DeSiard receives inflows from Bartholomew Lake and Black Bayou Lake only through control structures and naturally from Mill Bayou, an intermittent tributary near Fairbanks (See [APPENDIX A](#)).

Owner

State of Louisiana

Purpose

Water supply for the city of Monroe (DeSiard, currently provides 70% of the city's annual usage, which totals approximately 5 billion gallons. Nearly 1 billion gallons are provided by Black Bayou Lake, normally in late summer. In August 2007, the city began supplementing 0.5 billion gallons annually from the Ouachita River).

Size

1,250 acres

Watershed

21,349 acres: comprised of the watersheds of Bartholomew Lake (4,120 acres), Mill Bayou (7,050 acres), and Black Bayou Lake (10,179 acres). The watershed to lake: ratio is 17:1. The watershed consists of mixed pine/hardwood forests, agriculture lands, residential areas, and some commercially developed urban areas that primarily influence the lower half of the lake. The soils are slightly acidic with high clay contents and are moderately fertile.

Pool Stage

Max. Pool Stage North of Midway Dam - 72.0 ft. mean sea level (MSL).

*pool stage is set at 70.5 ft. from Nov. – April for floodwater retention in this area

Max. Pool Stage South of Midway Dam – 74.0 ft. MSL with stop logs at Hog Bayou Spillway (70.9 ft. MSL without stop logs in place). See [APPENDIX A](#).

Border Waters

NA

Spillway Descriptions

Vegetation Removal Structure / Spillway-North side of L-11 Canal: 12 ft. x 12 ft. concrete vertical box structure with 6 ft. wide spillways with stop logs on 3 sides. Floor height = 72.0 ft. MSL. Water drains into the L-11 canal through a culvert under Fink's Hideaway Rd.

Spillway on Southside of L-11 Canal: 9 ft. wide concrete spillway with stop logs. Height of spillway is 69.5 ft. MSL. Water drains directly into the L-11 canal.

Hog Bayou Spillway: 34 ft. wide spillway with stop logs, located on the lower end, just west of the R.R. crossing adjacent to Bayou DeSiard Country Club. With stop logs removed, it will release water in excess of 70.9 ft. MSL into Chauvin Bayou, which drains into the Ouachita River. Stop logs can retain water level up to 74.0 ft.

Drawdown Description

The maximum drawdown potential for the entire Bayou DeSiard is to a level of 67.0 ft. MSL, which represents an approximate drawdown of 5 ft. from normal pool. This is achieved by pumps at the water treatment facility on the south end. The portion of DeSiard north of Midway Dam can be lowered to 69.5 ft. MSL by removing the stop logs from both structures at the L-11 canal. With all stop logs removed, the north side structure can remove water at a rate of 300 cfs, whereas the spillway on the Southside can accommodate a flow of 100 cfs. Also, stop logs can be removed at the Hog Bayou Spillway to lower the water level to 70.9 ft. MSL.

Who Controls

Water levels in Bayou DeSiard are managed by the city of Monroe according to a water management plan to ensure a readily available drinking water source. The City of Monroe regulates the water level of Bayou DeSiard. Ouachita Parish Public Works regulates water levels for the purpose of flood control in collaboration with the City of Monroe. Winter drawdowns on the upper end to a level of 70.5 ft. MSL are conducted by the Parish to alleviate potential flood conditions. All manipulations of water levels must also be approved by the Bayou DeSiard-Bayou Bartholomew Cut-Off Loop Water Conservation Board.

LAKE AUTHORITY

Bayou DeSiard-Bayou Bartholomew Cut-Off Loop Water Conservation Board: created by Louisiana legislature in 1962 ([APPENDIX B](#)). The stated purpose is “to establish, maintain, and protect a favorable level of fresh water in Bayou DeSiard and Lake Bartholomew to be available for all beneficial uses and purposes”. They have the sole authority to control the flow of water into and out of DeSiard. Six members are appointed by the Governor and serve 4 year terms. Current members and contact information is provided in [APPENDIX C](#).

The City of Monroe: manipulates water levels in accordance with the management plan of the Water Conservation Board to ensure an adequate supply of quality drinking water for the city.

Ouachita Parish Public Works: maintains water levels through operation of control structures primarily for the purpose of flood control.

The Louisiana Department of Wildlife and Fisheries (LDWF): manages the fisheries and vegetation in the lake and enforces fish and wildlife regulations.

Associations

Bayou DeSiard Restoration Committee: created by legislature in 2005 (R.S. 38:3087.281 – 3087.294). The committee is comprised of 8 members appointed by the governor, serving 6 year terms, except for the police jury nominee who is to serve 2 years. The committee was created to help address habitat problems on the upper end of DeSiard. The stated purpose is "to restore the management and protections of the water in certain portions of Bayou DeSiard Lake, including but not limited to removal of aquatic plants, trees, and dredging to provide for the removal of soil deposits and any other necessary improvements which would benefit the Bayou DeSiard Lake ecosystem." A list of current members and contact information is located in [APPENDIX D](#).

ACCESS (see **APPENDIX A** for map with ramp locations)

Public Boat Ramps

1. Hwy. 136 near Sterlington: concrete, 5 trailer capacity, free
2. Hwy. 134 at Fairbanks: concrete, 10 trailer capacity, free
3. Dist. 2 Office: concrete, 10 trailer capacity, free
4. Conley's Boat Ramp on US Hwy. 80: concrete, 7 trailer capacity, \$3 fee

Piers

No Public Piers

State/Federal Facilities

Bayou DeSiard serves as a partial western border of Black Bayou National Wildlife Refuge which is owned by the City of Monroe and managed by the US Fish and Wildlife Service.

Artificial Reefs

None

Boat Rentals

Conley Boat Ramp: boat rentals and bait stand

SHORELINE DEVELOPMENT

Residential

The predominant development along Bayou DeSiard is residential. The lower end of the lake winds through the city limits of Monroe, where residential development along the lake has existed for over 50 years. Urban development is increasing north of Monroe, with residential areas currently being developed along the north shores of Bayou DeSiard.

Commercial/Business

Bayou DeSiard is the centerpiece for the University of Louisiana-Monroe, as well as many other businesses, especially along US Hwy. 80/DeSiard St. One of the largest employers in Monroe, Century-Link (formerly CenturyTel), is also located adjacent to Bayou DeSiard. The LDWF District 2 office and fish hatchery are located along the shoreline of Bayou DeSiard and utilize its water for hatchery operations.

Agriculture

Row crop farmland along Bayou DeSiard is primarily located along the northern end near Sterlington. Corn, soybeans, and cotton have long been grown in this area. A significant portion of this agricultural area has been replaced by residential development over the last 10 years.

PHYSICAL DESCRIPTION

Shoreline Length

58 miles of shoreline along the 28 mile length

Average Width

200 ft. (ranging from 75 ft. at upper end to 300 ft. at south end)

Average Depth

10 ft. overall (upper end average is approximately 5 feet)

Maximum Depth

37 ft. (near dam at Ouachita River)

Natural Seasonal Water Fluctuation

3 ft. (natural fluctuations are limited due to controlled inflows from Black Bayou Lake and Bartholomew Lake to sustain water levels for the city of Monroe)

Timber Type

Dense stands of bald cypress *Taxodium distichum* are found in the northern end of the lake. Cypress becomes less abundant and more scattered from north to south. Water tupelo is also present in some areas, but not occurring in dense stands.

EVENTS/PROBLEMS

Aquatic Vegetation

Overabundant aquatic vegetation has been a chronic problem on the northern half of Bayou DeSiard, especially the 14.5 mile section north of the fish hatchery bridge, since construction of the Ouachita River levee. Contributing causes of the problem include reduction of flow by earthen dam-type bridges and dense stands of bald cypress. In addition, sedimentation stemming from agricultural erosion leads to a high percentage of shallow water. Agricultural and chemical runoff has also contributed to poor water quality in the past and has provided for excess nutrients which promote undesirable vegetation and plankton blooms. Nine earthen dams were constructed without any overall planning, beginning in the 1920's as the City of Monroe expanded. Appendix E lists the dams and construction dates. Five of the road crossings and 3 of the railroad crossings are on the upper end. The cypress thickets further impede water flow and provide protected areas for the excessive accumulation of vegetation, especially duckweed, *Lemna spp.* and water hyacinth, *Eichhornia crassipes*. A solution for this problem has been pursued since the 1970's and is currently becoming an increasingly critical issue as the city of Monroe is expanding into the upper reaches of DeSiard. As the north end of DeSiard, has become more developed, complaints related to aesthetics, low water quality, and un-navigable areas have increased.

Public Access

Some sections of Bayou DeSiard are not accessible by the public due to construction of earthen dams ([APPENDIX E](#)). These sections have no public boat launches within them and are inaccessible by boat from the other sections. One proposed solution is to replace the earthen dams with elevated bridges to allow passage of boats. Dams that have been proposed for redesign include those at Bonaire Drive on the ULM campus, the Midway dam just north of Bonaire Drive, and also the earthen dam which separates Bartholomew Lake from Bayou DeSiard at US Hwy. 165. There is currently a culvert with a control structure in place that provides for water movement from Lake Bartholomew into Bayou DeSiard. These, and several other improvement ideas were originally proposed by the Bayou DeSiard Complex Project initiated in 1975 (see below).

Bayou DeSiard–Lake Bartholomew-Black Bayou Lake Complex Project (1975)

This project was spearheaded by Monroe resident George Mouk, who played a major role in restoration efforts for Bayou DeSiard. The goal of the project was to "improve the

quality and quantity of water in the DeSiard-Bartholomew-Black Bayou complex. They worked with local government entities and aided in securing funding for DeSiard projects, including a grant of \$60,000 by the State Board of Regents to the Northeast Louisiana University Soil and Plant Laboratory for a study of possible chemical contamination in 1981 (see Water Quality below).

Monroe-West Monroe Interim Study (1979 – 1986)

This study was conducted under the authority of the Ouachita River Comprehensive Survey which was authorized by Resolution of the U.S. Senate Committee on Public Works. It authorizes the U.S. Corps of Engineers to study a wide range of water resource problems for enhancement and protection of the environment. Monroe and West Monroe had been identified as areas experiencing periodic flooding due to an inefficient drainage system. The Bayou DeSiard complex, including Lake Bartholomew, Black Bayou Lake, and Bayou DeSiard, was particularly addressed during this study. The study identified problems, needs, and objectives, including proposals to improve and control water flows and water quality. The USFWS, in cooperation with LDWF, prepared three planning aid reports (11/6/79, 10/2/81, 10/29/82) and two Fish and Wildlife Coordination Act reports (8/21/84, 9/25/85). These reports inventoried the fish and wildlife resources of the project area and commented on flood control problems and potential projects developed by the Corps of Engineers. They are summarized in the May 1986 FWCA Report on the Bayou DeSiard Water Supply Study by M. Harney. Projects completed thus far as a result of this study include:

- a. The widening of bridges Shorty Payne Road, US Hwy. 134, and Century-Tel Drive
- b. Installation of control structures on Black Bayou Lake and Hannah's Run
- c. Conversion of the Country Club (Forsythe Avenue) dam to a wide-span bridge.

Bayou DeSiard Ecosystem Restoration Project

In 2000, the Vicksburg District of the U.S. Army Corps of Engineers (CEMVK) initiated a section 1135(b) feasibility study of the Bayou DeSiard ecosystem in accordance with the Water Resources Development Act of 1986. This is a mitigation project for the remediation of past Federal flood control projects that may have influenced the current conditions and problems of the DeSiard complex. The local sponsor is the Ouachita Parish Police Jury. The project has proposed restoration measures needed to improve and sustain water quality, sustain fish and wildlife resources, restore and enhance riparian ecosystem values to the human and natural environment on the upper end of Bayou DeSiard. Immediate and future ecosystem needs were investigated and plans were formulated to meet those needs. The following is a list of considered alternatives:

1. No action. The no-action alternative represents existing conditions. Under this alternative, the aquatic weed problem would increase and the fish and wildlife resources would continue to be adversely impacted.
2. Gated structure designed to lower the water level to 63.5 ft. NGVD, herbicide spraying to control aquatic weeds, and channel excavation.

3. Gated structure designed to lower the water level to 67.8 ft. NGVD, herbicide spraying to control aquatic weeds, and no channel excavation.
4. Boat bridge, gated structure designed to lower the water level to 63.5 ft. NGVD, herbicide spraying to control aquatic weeds, and channel excavation.
5. Boat bridge, gated structure designed to lower the water level to 67.8 ft. NGVD, herbicide spraying to control aquatic weeds, and no channel excavation.

Alternative 3 has become the recommended plan of CEMVK. This alternative was chosen due to it providing the greatest net increase in habitat units at the lowest incremental cost per habitat unit. CEMVK has completed an Environmental Assessment and released a Finding of No Significant Impact statement for the proposed project. An Environmental Impact Statement was not deemed necessary by Col. Frederick Clapp, Jr., District Engineer. Under this plan, LDWF will continue routine herbicide applications as well as recommend the frequency and extent of the 3.2 foot wintertime drawdowns. The following is a description of the proposed structure, to be located adjacent to the L-11 canal just northeast of the existing structure- (2) 48 inch corrugated metal pipes, approximately 125 ft. long with (2) 4 ft. x 4 ft. slide gates positioned on the upstream side. With the gates fully opened, the drawdown from pool stage (71.0 ft.) will take approximately 20 days. A maximum drawdown to 67.8' MSL would take approximately 30 days.

Source: March 2007 Draft of the Ecosystem Restoration Report for Bayou DeSiard by CEMVK.

NOTE: The Bayou DeSiard Restoration Committee had originally rejected this plan, but has since agreed to a similar structure that also allows for removal of surface vegetation. Construction of this structure has not yet begun.

MANAGEMENT ISSUES

AQUATIC VEGETATION

Background Information

Bayou DeSiard has a diverse and often problematic community of aquatic plants. The majority of vegetation is found north of the L-11 canal, which bisects Bayou DeSiard nearly in half. A culvert underneath this canal provides for a hydrologic connection. The north end is where most of the aquatic vegetation problems originate. Floating and emerged vegetation often forms dense mats that hinder navigation and reduce water quality (Figure 1). Vegetation south of the L-11 canal is primarily restricted to the shoreline and comprised of emergent species. A complete list of plant species is found in the Aquatic Type Map and Vegetation Surveys section below.



Figure 1. Aerial photo showing typical habitat in northern section of Bayou DeSiard, Louisiana. LDWF file photo.

Aquatic Type Maps and Vegetation Surveys

A type map of vegetation was conducted on Bayou DeSiard on July 30, 2012 (see MP-B).

Prior to the 2012 type map, no formal aquatic type maps had been conducted by LDWF, but various vegetation surveys have been performed by different entities, including:

1. Aquatic Vegetation in Bayou DeSiard, Status and Recommendations May 1982: compiled by LDWF Inland Fisheries Personnel and the Ouachita Parish Department of Highways

2. LDWF Inland Fisheries plant survey of 1985 conducted by Richardson and Hughes
3. US Army Engineer Research and Development Center field study of spring and summer 2001
4. Observations by Inland Fisheries personnel

The following summary of aquatic vegetation is based on the compilation of these surveys/observations:

Although aquatic plants can be found along the entire length of Bayou DeSiard, the majority of the vegetation is located north of Fink's Hideaway Rd. The conditions that make this area conducive to aquatic growth are mentioned in the previous section. Submerged species identified include: coontail *Ceratophyllum demersum*, fanwort *Cabomba caroliniana*, elodea, *Elodea canadensis*, southern naiad *Najas guadalupensis*, and filamentous algae *Chara sp.* These species change in abundance annually, sometimes causing navigation problems in the upper end. Emergent species common in DeSiard include: water primrose *Ludwigia uruguayensis*, alligatorweed *Alternanthera philoxeroides*, parrots feather *Myriophyllum aquaticum*, American lotus *Nelumbo lutea*, water pennywort *Hydrocotyle umbellata*, and cattail *Typha sp.* Floating species include: duckweed *Lemna spp.*, water hyacinth *Eichhornia crassipes*, watermeal *Wolffia columbiana*, mosquitofern *Azolla caroliniana*, and frogbit, *Limnobium spongia*. Duckweed and water hyacinth cause the biggest problems on Bayou DeSiard, often entirely covering large areas of the upper end and posing a risk to fish survival and impeding navigation. These species accumulate upstream of narrow constrictions and in bends protected from wind action. They increase in abundance in the northern cypress thickets and flow downstream with current and wind. In the deeper southern half of Bayou DeSiard, vegetation is associated primarily with shallow shoreline areas, with filamentous algae being the only species of concern.

Aquatic Vegetation Treatment History

L-11 Canal Structure

This structure was constructed in 1972 for the dual purpose of flood control and removal of floating vegetation from the upper end of DeSiard. It is a 12 ft. x 12 ft. square vertical spillway with stop logs located adjacent to the Fink's Hideaway Road dam. It relies on downstream flow to carry floating vegetation and excess water to where it flows over the top of this structure and empties into the L-11 canal via a culvert underneath the roadbed. This canal, which is a channelized section of Chauvin Bayou, built during a 1972 federal flood control project, actually crosses over Bayou DeSiard at this location. Floating plants are deposited into the canal and carried toward Bayou Lafourche and the Ouachita River. The elevated levees of the L-11 canal, along with the control structure, prohibit floating vegetation from reaching the south end. This structure is moderately effective at the removal of floating vegetation. Thus, during summer months with rapid weed growth and low water levels, water must be released from Bartholomew Lake via a gravity flow culvert structure into Bayou DeSiard to cause a flow and carry the vegetation downstream into the structure. Bartholomew Lake can be refilled by pumping

water from Bayou Bartholomew. The Ouachita River must be at a minimum of 55' MSL for the pumps to operate. Even though this action would result in the removal of some floating vegetation, maintenance of water levels for the city's water supply has always been the primary purpose for the operation of the pumps, which is also expensive.

Duckweed Barrier

Various floating boom-type, semi-permanent barriers have been put in place at the Monroe Fish Hatchery Bridge and at the Railroad trestle north of Shorty Payne Rd. over the years. The primary purpose for these barriers was to cause the accumulation of large mats of duckweed so that it could be efficiently sprayed with herbicide. Two floating booms of different lengths were positioned on each side of the bridge opening on the upstream side, with one end attached at the bank, and the other attached to an anchor. The booms were positioned to form an offset V, allowing for boat passage but blocking the downstream flow of floating vegetation. The booms could be moved to allow the release of the duckweed after it had been treated. Vandalism was a chronic problem with the structures. Also, current flow during high water periods was required for them to be effective. The last barrier structures were implemented in the late 1980's and also soon became damaged and useless.

Grass Carp

A total of 3,200 triploid grass carp, *Ctenopharyngodon idella* (TGC) were stocked into the upper 12 miles of Bayou DeSiard on October 7, 1994. It was estimated that 389 of this 432 acres were infested with aquatic vegetation, primarily fanwort and coontail. This represented a stocking rate of 8 carp per vegetated acre. Barriers constructed of a sturdy frame with removable panels of 1.5 inch mesh screen were placed at the Bartholomew Lake culvert at Hwy. 165 on the north end and at the A&LM Railroad trestle at Black Bayou on the southern end. The cost for the fish was \$11,400 and the cost of the 2 barriers was \$34,100. The total cost was shared between the DeSiard-Bartholomew Water Conservation Board, the City of Monroe, the Ouachita Parish Police Jury, and contributions from residents living along Bayou DeSiard. The grass carp project was officially terminated in 1997, with little to no effect noted to vegetation in the project area. Vandalism to the lower barrier in 1996, as well as 2 collapses due to water pressure allowed grass carp to escape from the confined area. An underwater inspection revealed several gaps in the upstream barrier as well. LDWF sampling confirmed the presence of grass carp upstream and downstream of the project area.

Cookie Cutter

The mechanical vegetation shredder informally termed as the "Cookie Cutter" (Figure 2) was contracted for operation in August, 1981. This device was brought in from Florida to shred a large floating mat of vegetation near the upper end. Immediate results of the effort were deemed satisfactory by LDWF. A major duckweed infestation developed the following year though. It was believed to have been a result of a nutrient increase from the vegetation shredding. Low water levels also did not allow for the flushing of the vegetation through the L-11 structure.



Figure 2. Photo of Cookie Cutter vegetation shredder, similar to one used on Bayou DeSiard in 1981.

Herbicide Application

Application of contact herbicides on floating and emerged vegetation has been the primary control method used on Bayou DeSiard. Glyphosate, diquat, and 2, 4-D have all been used by LDWF personnel to address the vegetation problem. In the early 1990's, the State appropriated funding for the Ouachita Parish Police Jury to purchase diquat for duckweed control. The appropriations have continued annually to date. The newly formed Bayou DeSiard Restoration Committee purchased additional herbicide for application in 2007 and 2008. The Committee purchased 197 gallons of diquat in 2007 and 157 gallons of diquat and 42 gallons of glyphosate in 2008. Historically, private individuals have also purchased herbicides for local control of vegetation in residential areas.

In 2003, an application of Sonar® (fluridone) was made to the upper end of DeSiard for control of both submersed (coontail, fanwort) and duckweed. Vegetation control was not substantial enough to outweigh the extended interruption in surface water supply to shoreline residents, agricultural interests (row crops and a plant nursery), and a golf course. A second application in 2004 was cancelled because of these inconveniences.

An Environmental Assessment completed by the USACE in 2002 (*in* March 2007 Ecosystem Restoration Report for Bayou DeSiard, Monroe, Louisiana, U. S. Army Corps of Engineers, Vicksburg District) determined that herbicide spraying along with water level manipulation was currently the most practical alternative for water quality improvement and control of noxious aquatic vegetation on the upper end of Bayou DeSiard. Perennial herbicide spraying is not an efficient control method but will be necessary until the physical attributes of Bayou DeSiard that contribute to overabundant aquatic vegetation are addressed.

HISTORY OF REGULATIONS

Recreational

Statewide regulations are in effect for all species.

The recreational fishing regulations for 2012 may be viewed at the link below:

http://www.wlf.louisiana.gov/sites/default/files/pdf/publication/31743-recreational-fishing-regulations/2012_fishing_regulations.pdf

Black Bass (Largemouth or Spotted): No minimum length, 10 fish per day

Crappie: 50 per day

Bream (Sunfish): No limit

Buffalo Fish or their hybrids: 16" minimum length, 25 per day under 16"

Freshwater Drum (Gaspergou): 12" minimum length, 25 per day under 12"

Bowfin (Choupique, Grinnel): 16" minimum length

Channel Catfish: 11" minimum length (see Catfish below for possession limit)

Blue Catfish: 12" minimum length (see Catfish below for possession limit)

Flathead Catfish: 14" minimum length (see Catfish below for possession limit)

Catfish (Blue, Channel, and Flathead): possession limit caught on a recreational license shall be 100. The 100 fish may be a single species or a combination of the above three. Of the 100 fish, an angler may possess a maximum of 25 undersize catfish of a single or combination of all three species.

White Bass: 50 daily

Yellow Bass: 50 daily

Commercial

Statewide regulations are in effect except for the following:

1994 Prohibition and Season for Gill and Trammel Nets – R.S. 56:22(B).

In association with the triploid grass carp stocking of 1994, gill and trammel nets were banned between Shorty Payne Rd. and U.S. Hwy. 165. In addition, the Ouachita Parish Police Jury has designated a commercial season to run from November 1 through the last day of February for the area between Shorty Payne and the confluence of Bayou DeSiard

with the Ouachita River. An annual permit is required from the Police Jury. Only nets of 3.5" minimum bar mesh or 7.0" stretched may be fished. Nets must also be tended during daylight hours only. These regulations are currently in effect.

The 2012 statewide commercial fishing regulations may be viewed at the link below:

http://www.wlf.louisiana.gov/sites/default/files/pdf/publication/31745-commercial-fishing-regulations/2012_commercial_fishing.pdf

DRAWDOWN HISTORY

Personal communication with Janice Little (retired LDWF employee) and others suggests that at least one drawdown occurred in the 1960's. Janice stated that she knew of at least one 3 foot drawdown for vegetation control in the 1960's. However, the Ouachita Parish Public Works Department conducts drawdowns of 1.5 ft. to an MSL of 70.5 ft. for the purpose of flood prevention during the winter months. See DeSiard MP-B for proposed drawdowns of Bayou DeSiard and Black Bayou for habitat enhancement purposes.

FISH KILLS / DISEASE HISTORY

8/6/1999 – Approximately 100 fish, including largemouth bass, bluegill, redear, common carp, grass carp, and crappie were found dead and dying in a slough near the Frenchman's Bend area. Poor water quality was attributed.

7/19/2000 – Several hundred small bluegill and threadfin shad, and also 80 yellow bullhead were found floating in the lower end, near the pumping station. The kill was most likely caused by a localized pesticide application.

7/19/2004 – A kill affecting 200 gizzard shad, 17 largemouth bass, 25 crappies and 85 bluegills occurred in Hannah's Run. Low dissolved oxygen was documented. A recent herbicide treatment along with a heavy rainfall and poor water quality in Black Bayou were likely contributors.

9/8/2008 – Heavy rainfall associated with Hurricane Gustav was blamed for a kill in the vicinity of the LDWF Dist. 2 office. A total of 60 largemouth bass, 3 chain pickerel, 2 crappies, and 4 bluegills were observed. Low dissolved oxygen levels were documented in the bayou following the storm.

CONTAMINANTS / POLLUTION

Water Quality

Most of the water quality concerns are in the upper end of Bayou DeSiard, far away from the City of Monroe water intake on the south end. The problems are mainly a threat to the fisheries only. Past and potential problems are mainly associated with hypoxia due to the senescence of vegetation. The ULM Soil-Plant Analysis Laboratory initiated a 3 year study in 1981 to determine baseline levels of various sediment and water quality parameters in Bayou DeSiard. The study was titled: Investigation of Toxic Residue and

Water Quality Parameters in Bayou DeSiard (available in Dist. 2 files). Sampling continued through 2000 to determine variation from the baseline data. The USACE performed water quality sampling as part of their 2002 Environmental Impact Study for the Bayou DeSiard Ecosystem Restoration Project. They reviewed the sampling performed by the ULM Soils and Plant Lab from 1984 – 2000, and the LDEQ 305 (b) report from 2000. All three data sources showed that the water quality in DeSiard is not severely impaired. There were slight impairments linked to the presence of cadmium, copper, and other metals, organic enrichment, and low dissolved oxygen, but the baseline concentrations were seldom exceeded. These sources were linked to hydro-modification, urban runoff, and storm sewers. Sediment samples taken by USACE showed the presence of pesticides in a few samples, but the majorities were at very low levels. DDE, a metabolite of DDT, was the only pesticide constituent detected at or above the Environmental Response-Moderate level. At ER-M concentrations, some sensitive organisms may exhibit adverse effects. Only 1 sample showed DDE levels to be this high, and was considered not to be of great environmental consequence. The LDEQ 305(b) report of 2000 claimed that the waters north of the L-11 canal were fully supportive for drinking water supply and primary and secondary contact recreation, but not for the propagation of fish and wildlife. The City of Monroe continuously monitors water quality at the site of entrance into the treatment facility for parameters involved with drinking water suitability.

A fish flesh consumption advisory was issued in 2003 by the LA. Dept. of Environmental Quality and is currently in effect for Bayou DeSiard due to presence of methyl mercury in certain fish. Women of childbearing age and children under age 7 have been advised to limit consumption of fish to 1 meal per month and to consume no bowfin. Others are advised to limit fish meals to 4 meals per month, and to not consume bowfin.

<http://www.deq.louisiana.gov/portal/Portals/0/planning/Fish%20Consumption%20Advisory%20Table%20-%202-18-09.pdf>

Water Level

Water levels are continuously monitored by the City of Monroe Water Plant and the Ouachita Parish Public Works Dept. Staff gauges are located at several sites on DeSiard, with most of these being in close proximity of bridge crossings for convenient viewing. Annual water fluctuation is normally limited to less than 3 feet. Mill Bayou is the only significant tributary entering Bayou DeSiard and it primarily affects water level in the northern end. Water from Bayou Bartholomew is routinely pumped in through Bartholomew Lake if necessary to maintain a minimum storage capacity for the City of Monroe water usage.

BIOLOGICAL

Fish Sampling

Standardized sampling according to LDWF Inland Fisheries Division guidelines was initiated in 1989 on Bayou DeSiard. Prior to 1989, there was an electrofishing sample in 1976, a gill net sample in 1977, numerous rotenone samples and 2 creel surveys (Table 1). Rotenone sampling was discontinued on DeSiard in 1996. In 2004, DeSiard was put on a 3-year rotation for sampling, with spring and fall electrofishing and summer shoreline seining. There are currently six stations scheduled for electrofishing, four for seining, and four for gill net sampling (Table 2.)

Table 1. Summary of fisheries sampling on Bayou DeSiard, 1959 – 2016.

1959-1964	Rotenone: description of samples unavailable
1959	Creel Survey: description unavailable
1962	Creel Survey: description unavailable
1969	Rotenone: 3 stations
1986	Rotenone: 1 station
1989	Electrofishing: 10 stations, fall
1990	Electrofishing: 6 stations, spring and fall Seining: 4 stations, 6 samples total
1991	Electrofishing: 8 stations, fall Seining: 3 stations, 6 samples total Gill Nets: 3 stations Frame Net: 1 station
1992	Electrofishing: 6 stations, spring and fall Rotenone: 2 stations
1994	Electrofishing: 5 stations, spring and fall Gill Nets: 3 stations Rotenone: 2 stations
1995	Gill Nets: 3 stations
1996	Gill Nets: 2 stations, 3 samples total Rotenone: 2 stations
1998	Electrofishing: 6 stations, spring
2000	Electrofishing: 6 stations, spring and fall
2002	Electrofishing: 6 stations, spring
2004	Electrofishing: 6 stations, spring and fall Seining: 4 stations
2007	Electrofishing: 6 stations, spring and fall Seining: 5 stations
2009	Gill Nets: 2 stations
2010	Electrofishing: 6 stations, spring and fall Seining: 5 stations
2012	Aquatic Type Map

2013	Electrofishing: 6 stations, spring and fall Seining: 5 stations Gill Nets: 3 stations
2014	Lead Nets: 3 stations Aquatic Type Map
2015	Aquatic Type Map
2016	Electrofishing: 6 stations, spring and fall Seining: 5 stations Gill Nets: 3 stations

Table 2. LDWF sampling station descriptions on Bayou DeSiard, Louisiana.

Electrofishing Stations		
Station	Description	Coordinates
04	Frenchman's Bend	N32°38'39" W-92°02'23"
05	Bottle shop at Hwy. 165	N32°32'28" W-92°04'35"
08	Conley's on DeSiard St.	N32°31'35" W-92°02'51"
09	Monroe Fish Hatchery	N32°35'28" W-92°03'49"
10	At L-11 Canal	N32°33'19" W-92°01'26"
11	Upper End	N32°41'06" W-92°02'35"

Seining Stations		
Station	Description	Coordinates
31	Hwy. 134 Ramp	N32°38'35" W-92°02'28"
32	Fish Hatchery Ramp	N32°25'22" W-92°03'46"
33	Conley's Ramp	N32°31'32" W-92°02'51"
37	Country Club Ramp	N32°32'34" W-92°05'38"

Gill Net Stations		
Station	Description	Coordinates
52	Conley/ULM	N32°32'17" W-92°02'38"
53	L-11 to Hatchery	N32°35'05" W-92°04'02"
54	Hatchery to Shorty Payne Rd.	N32°36'09" W-92°03'41"
55	Shorty Payne to Hwy. 165	N32°37'22" W-92°02'36"

Lake Records

No official lake records have been kept for Bayou DeSiard.

Stocking History

Hybrid striped bass have been the most commonly stocked fish species in Bayou DeSiard since LDWF stocking was initiated in 1974 (Table 3). The stockings were terminated in 1992 due to

declining angler interest. Florida bass were stocked on a few occasions in the 1990's to assess their suitability in Bayou DeSiard, though it was later determined that the habitat and other factors were not adequate to perpetuate a quality or trophy bass fishery. It should also be noted that LDWF stocked many State waterbodies with Florida bass in the early 1990's without sufficient evaluation, though now waterbodies must meet special criteria and be prioritized for stocking efforts.

Table 3. History of fish stockings in Bayou DeSiard, Louisiana from 1974 – 1998.

YEAR	SPECIES	NUMBER
1974	largemouth bass	9,450
1976	hybrid striped bass	11,770
1977	hybrid striped bass	15,750
1977	blue and channel catfish	3,000
1978	blue and channel catfish	8,000
1978	hybrid striped bass	13,260
1979	hybrid striped bass	19,965
1980	black crappie	5,824
1980	largemouth bass	3,000
1980	hybrid striped bass	17,555
1981	largemouth bass	10,200
1981	hybrid striped bass	15,350
1982	hybrid striped bass	16,247
1983	hybrid striped bass	15,366
1984	hybrid striped bass	15,785
1985	hybrid striped bass	23,327
1986	hybrid striped bass	13,500
1987	hybrid striped bass	15,150
1988	hybrid striped bass	18,760
1989	Florida largemouth bass	3,200
1989	hybrid striped bass	21,108
1989	flathead catfish	24,445
1990	hybrid striped bass	26,368
1991	hybrid striped bass	15,000
1992	hybrid striped bass	25,000
1993	Florida largemouth bass	5,000
1994	triploid grass carp	3,200
1995	Florida largemouth bass	3,000
1998	striped bass	200

Species Profile

The following is a list of known species documented to exist in Bayou DeSiard (Table 4). This list was generated from LDWF samples; University of Louisiana at Monroe (ULM) collections, and sampling conducted by the U.S. Army Corps of Engineers as part of their 2001 environmental assessment.

Table 4. List of fish species documented from Bayou DeSiard, Louisiana.

Family	Common Name	Scientific Name
--------	-------------	-----------------

Gar Family, LEPISOSTEIDAE

- Spotted gar, *Lepisosteus oculatus* (Winchell)
- Longnose gar, *Lepisosteus osseus* (Linnaeus)
- Shortnose gar, *Lepisosteus platostomus* (Rafinesque)
- Alligator gar, *Atractosteus spatula* (Lacépède)

Bowfin Family, AMIIDAE

- Bowfin, *Amia calva* (Linnaeus)

Herring Family, CLUPEIDAE

- Gizzard shad, *Dorosoma cepedianum* (Lesueur)
- Threadfin shad, *Dorosoma petenense* (Günther)

Minnow Family, CYPRINIDAE

- Blacktail shiner, *Cyprinella venusta* (Girard)
- Common Carp, *Cyprinus carpio* (Linnaeus)
- Redfin shiner, *Lythrurus umbratilis* (Girard)
- Golden shiner, *Notemigonus crysoleucas* (Mitchill)
- Emerald shiner, *Notropis atherinoides* (Rafinesque)
- Taillight shiner, *Notropis maculatus* (Hay)
- Pugnose minnow, *Notropis emiliae* (Hay)
- Bullhead minnow, *Pimephales vigilax* (Baird and Girard)
- Grass carp (triploid), *Ctenopharyngodon idella* (Valenciennes)

Sucker Family, CATOSTOMIDAE

- Lake chubsucker, *Erimyzon sucetta* (Lacépède)
- Smallmouth buffalo, *Ictiobus bubalus* (Rafinesque)
- Bigmouth buffalo, *Ictiobus cyprinellus* (Valenciennes)

Black buffalo, *Ictiobus niger* (Rafinesque)
Spotted sucker, *Minytrema melanops* (Rafinesque)

Freshwater Catfish Family, ICTALURIDAE

Black bullhead, *Ameiurus melas* (Rafinesque)
Brown bullhead, *Ameiurus nebulosus* (Lesueur)
Yellow bullhead, *Ameiurus natalis* (Lesueur)
Tadpole madtom, *Noturus gyrinus* (Mitchill)
Channel catfish, *Ictalurus punctatus* (Rafinesque)
Blue catfish, *Ictalurus furcatus* (Lesueur)
Flathead catfish, *Pylodictis olivaris* (Rafinesque)

Pike Family, ESOCIDAE

Grass pickerel, *Esox americanus vermiculatus* (Lesueur)
Chain pickerel, *Esox niger* (Lesueur)

Pirate Perch Family, APHREDODERIDAE

Pirate perch, *Aphredoderus sayanus* (Gilliams)

Killifish Family, CYPRINODONTIDAE

Golden topminnow, *Fundulus chrysotus* (Günther)
Starhead topminnow, *Fundulus nottii* (Agassiz)
Blackstripe topminnow, *Fundulus notatus* (Rafinesque)
Blackspotted topminnow, *Fundulus olivaceus* (Storer)

Livebearer Family, POECILIIDAE

Western mosquitofish, *Gambusia affinis* (Baird and Girard)

Silverside Family, ATHERINIDAE

Brook silverside, *Labidesthes sicculus* (Cope)

Drum Family, Sciaenidae

Freshwater drum, *Aplodinotus grunniens* (Rafinesque)

Temperate Bass Family, PERCICHTHYIDAE

White bass, *Morone chrysops* (Rafinesque)
Yellow bass, *Morone mississippiensis* (Jordan and Eigenmann)
Striped bass, *Morone saxatilis* (Walbaum)
Hybrid striped bass, *Morone saxatilis x chrysops*

Sunfish Family, CENTRARCHIDAE

Flier, *Centrarchus macropterus* (Lacépède)
Green sunfish, *Lepomis cyanellus* (Rafinesque)
Warmouth, *Lepomis gulosus* (Cuvier)
Orangespotted sunfish, *Lepomis humilis* (Girard)
Bluegill, *Lepomis macrochirus* (Rafinesque)

Dollar sunfish, *Lepomis marginatus* (Holbrook)
Longear sunfish, *Lepomis megalotis* (Rafinesque)
Redear sunfish, *Lepomis microlophus* (Günther)
Spotted sunfish, *Lepomis punctatus* (Valenciennes)
Redspotted sunfish, *Lepomis miniatus* (Jordan)
Bantam sunfish, *Lepomis symmetricus* (Forbes)
Florida largemouth bass, *Micropterus floridanus* (Kassler et al.)
Northern largemouth bass, *Micropterus salmoides* (Lacépède)
Spotted bass, *Micropterus punctulatus* (Rafinesque)
White crappie, *Pomoxis annularis* (Rafinesque)
Black crappie, *Pomoxis nigromaculatus* (Lesueur)

Pygmy Sunfish Family, ELASSOMATIDAE

Banded pygmy sunfish, *Elassoma zonatum* (Jordan)

Perch Family, PERCIDAE

Bluntnose darter, *Etheostoma chlorosomum* (Hay)
Swamp darter, *Etheostoma fusiforme* (Girard)
Slough darter, *Etheostoma gracile* (Girard)
Cypress darter, *Etheostoma proeliare* (Hay)

Largemouth Bass Genetics

The only genetic analysis of the largemouth bass population was conducted in 1992, three years after the initial stocking of 3,200 Florida bass fingerlings into Bayou DeSiard. All of the 42 bass sampled were determined to be of the northern genotype. Florida bass are no longer being stocked into Bayou DeSiard.

CREEL

No recent creel surveys have been conducted on Bayou DeSiard. Limited angling use and accessibility could hinder the collection of information. The last known creel surveys were conducted in 1959 and 1962. It was estimated that nearly 35,000 anglers fished DeSiard in 1962, with 92% considered "successful" by harvesting at least 1 fish. Bluegill comprised the largest percentage of checked fish, followed by crappie then largemouth bass. The number and location of the surveys is not available.

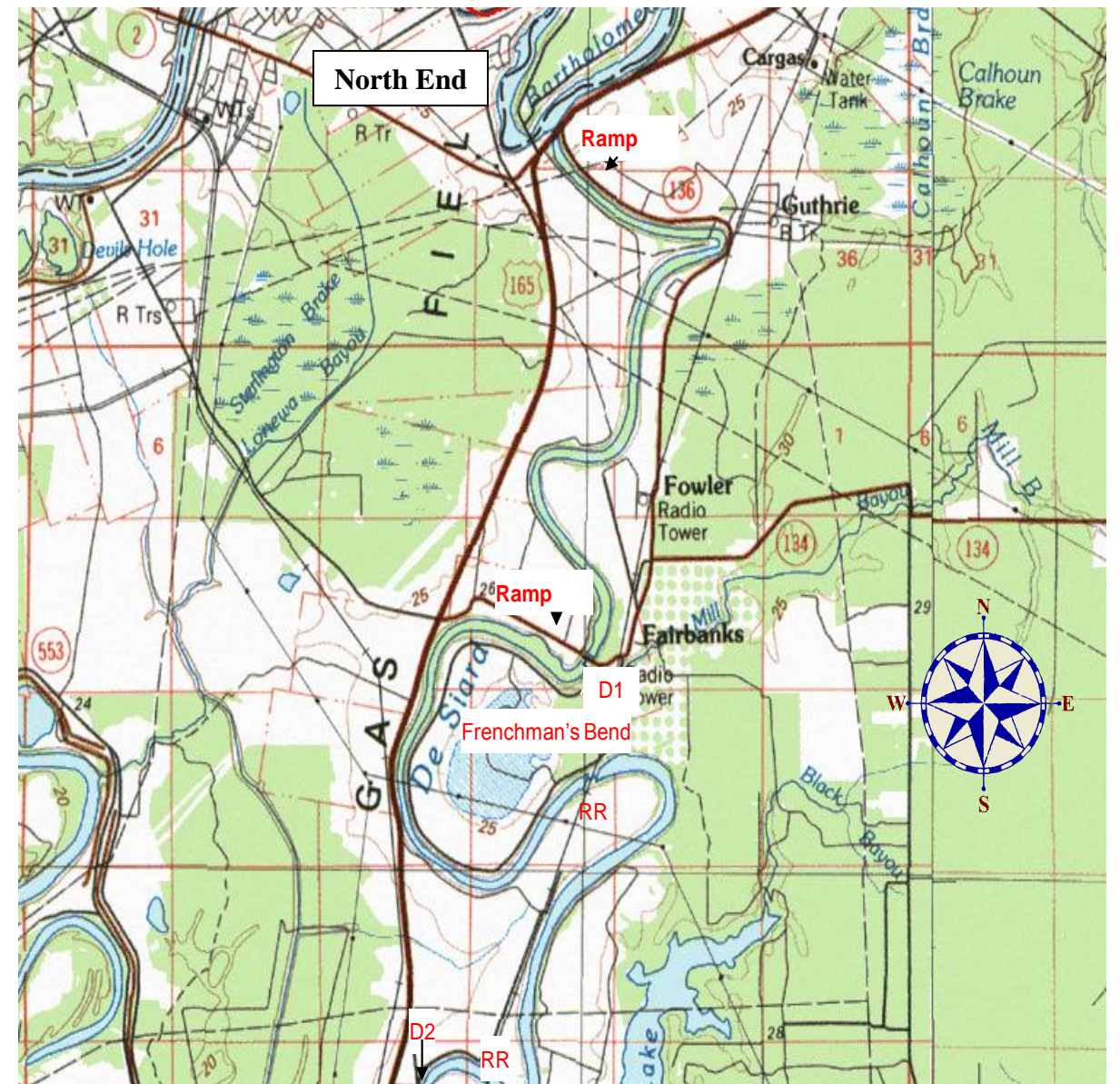
WATER USE

City of Monroe water supply
Residential, commercial, and agricultural irrigation
Fishing
Boating, Water skiing (including ULM water ski team)
Duck hunting (limited to upper end)

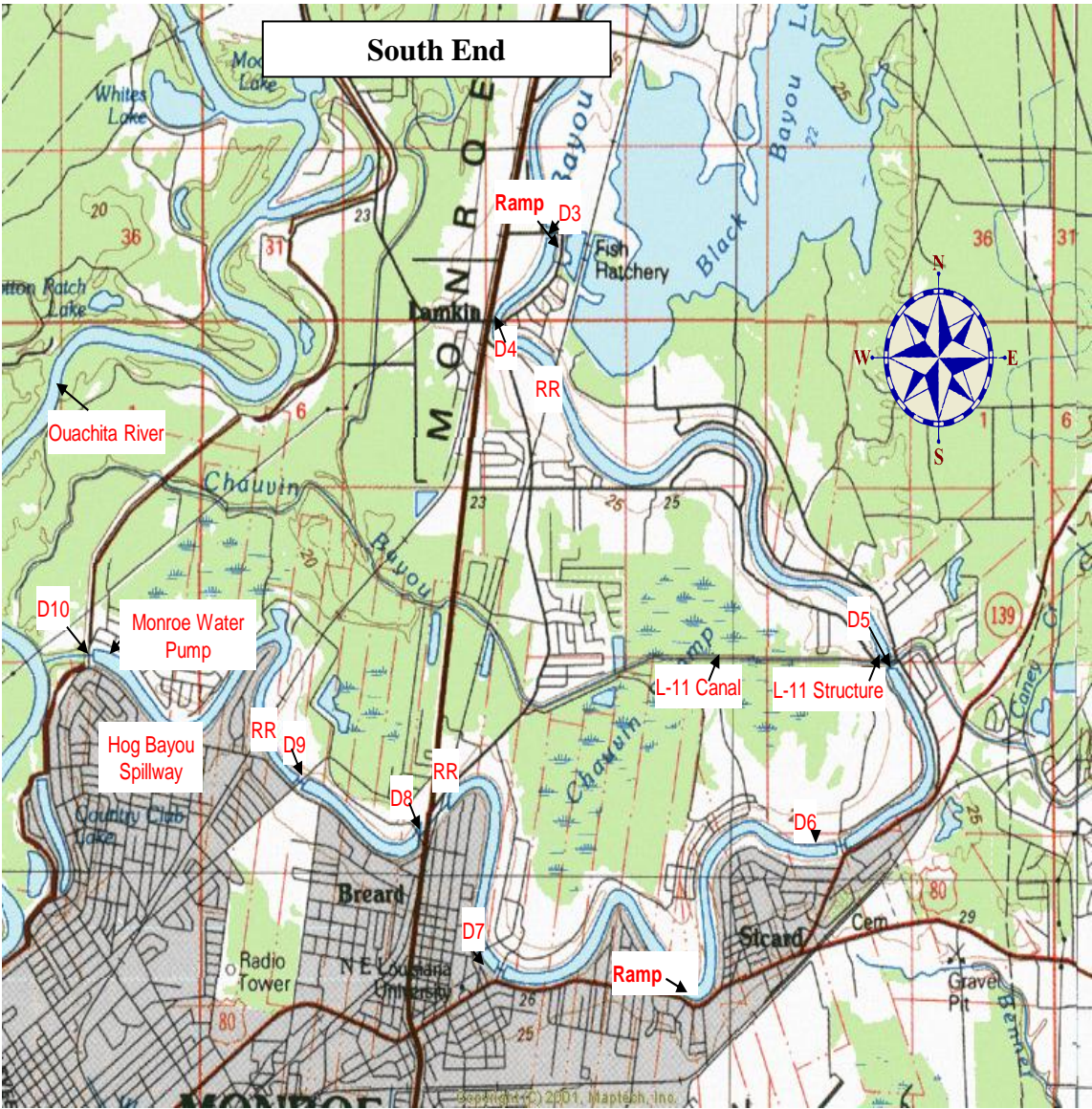
APPENDIX A

[\(return to Impoundment\)](#)

Map of Bayou DeSiard



South End



APPENDIX B

[\(return to Lake Authority\)](#)

Legislative Creation of the Bayou DeSiard-Bayou Bartholomew-Cutoff Loop Water Conservation Board

ACT No. 308 of 1962

Senate Bill No. 163. By Messrs. Carpenter and Adcock and Reps. McCormack, John and Gibbs.

AN ACT

To create and establish the Bayou DeSiard-Bayou Bartholomew Cut-Off Loop Water Conservation Board of Ouachita and Morehouse Parishes; and to define and establish its membership, purposes, powers and duties.

Be it enacted by the Legislature of Louisiana:

Section 1. There is hereby created a water conservation board to be known as the Bayou DeSiard-Bayou Bartholomew Cut-Off Loop Water Conservation Board of Ouachita and Morehouse Parishes, Louisiana.

Section 2. The Board shall be a political agency of the State of Louisiana and, subject to the limitations and restrictions set out in this Act, shall have establish, maintain, and protect a favorable level of freshwater in Bayou DeSiard and Bayou Bartholomew Cut-Off Loop in Townships 18, 19 and 20 North, Ranges 3 and 4 East, in the Parishes of Ouachita and Morehouse, State of Louisiana, to be available for all beneficial uses and purposes.

Section 3. The Board shall have the power to sue and be sued; to buy and sell; to exercise the right of expropriation; to own, maintain and operate property, both movable and immovable, to acquire servitudes, rights of way and flowage rights, to negotiate and execute contracts; to cooperate with the State of Louisiana or any agency or political subdivision thereof or with the government of the United States or any department or agency thereof on any basis that the Board shall deem advisable for the joint or separate construction, ownership, operation and maintenance of pump facilities, pipelines, floodgates, water conveyors and other devices, equipment and property, to accept gifts or contributions of any nature from the State of Louisiana or the United States or any agency or political subdivision thereof, and to make and collect reasonable charges or fees for its services in connection with the water made available by any facilities provided by said Board; provided, no charges shall be assessed against any municipality or other political subdivision, and that in exercising the powers and authority aforesaid, the Board shall cooperate with and shall act under the super vision and control of, the Louisiana Department of Public Works.

Section 4 The Board shall not build any dam, sill or other restrictive structure of any kind which

will reverse or otherwise affect the natural flow of Bayou Bartholomew; nor shall it install, maintain or operate any pump or other device to remove any water Bayou Bartholomew except during the months of February through June of each year. The Board shall not have authority to destroy or substantially diminish prior or vested water rights or uses.

Section 5. The Board shall consist of six members who shall be appointed by the Governor and shall serve for a term of four years and until their successors have been named and qualified as follows:

One member to be appointed from a list of three names submitted to the Governor by the Monroe Utilities Commission; One member to be appointed from a list of three names submitted to the Governor by the Ouachita Parish Police Jury, said persons whose names appear on the list to be legal residents of Ward 1 of Ouachita Parish. One member from Ouachita Parish to be appointed from a list of three names submitted to the Governor by the Town Council of the municipality of Sterlington, said persons whose names appear on the list to be legal residents of the Municipality of Sterlington. One member to be appointed from a list of three names submitted to the Governor by the Mayor and Board of Aldermen of the City of Bastrop, Louisiana; One member to be appointed from a list of three names submitted to the Governor by the Morehouse Parish Police Jury; and one member from Morehouse Parish to be appointed from a list of three names submitted to the Governor by the Bastrop Association of Commerce & Industry of Bastrop, Louisiana.

Section 6. The Board shall elect from its own membership a chairman, a secretary, and a treasurer. Four (4) members of said Board shall constitute a quorum for the transaction of business and the meetings of the Board shall be held at such time and place as shall be fixed at the call of the Chairman after due notice to the full membership

Section 7. The membership of said Board shall serve without compensation for its services to the Board, but it shall be entitled to reimbursement for actual expensed incurred in the performance of its duties. Approved by the Governor: July 13, 1962

APPENDIX C

[\(return to City of Monroe\)](#)

Current Members of the Bayou DeSiard-Bayou Bartholomew Loop Water Conservation Board

Address: P.O. Box 2105, Monroe 71210

Appt By	Board Members	Address	Work Phone
Town of Sterlington -- OPPJ	Brown, John, Chairman	251 Dixon Estate Road Sterlington, LA. 71280	665-9345 (fax) 450-2878 (cell)
MPPJ	Cain, Jerry	7411 West Lake Road Sterlington, LA. 71280	
City of Monroe Mayor Jamie Mayo	Gibbs, Bobby	1451 Frenchman's Bend Rd. Monroe, LA. 71203	329-2395 329-2399 (fax) 366-4121 (cell)
MPPJ	Gray, Jim	7833 East Lake Road Sterlington, LA. 71208	
OPPJ	Rabb, Morris	1531 Frenchman's Bend Rd. Monroe, LA. 71203	329-4641 376-4641 (cell)
	Stokes, David	6961 East Lake Road Sterlington, LA. 71208	342-5150

Current Board Members as of December 2007

OPPJ: Ouachita Parish Police Jury

MPPJ: Morehouse Parish Police Jury

APPENDIX D

[\(return to Bayou\)](#)

Current Members of the Bayou DeSiard Restoration Commission (created by
R.S.38:3087.284)

P. O. Box 94004
Baton Rouge, LA 70804
(225)342-0919

Seven member board appointed by Governor.: 2 appointed at large by Governor.; 1 member nominated by state rep. for House Dist. 14; 1 member nominated by state rep. for House Dist. 16; 1 member nominated by state senator for Senate Dist. 35; 1 member nominated by state senator for Senate Dist. 33; 1 member nominated by Ouachita Parish Police Jury. Commissioners initially appointed shall serve terms as follows: At large member shall serve 6 year term; Members nominated by legislative delegation of Ouachita Parish shall serve 4 year term; Members nominated by Ouachita Parish Police Jury shall serve 2 year term. Commissioners thereafter appointed at expiration shall serve term of 6 years.

Breen, Michael S	121 East Shore Road Monroe, LA 71203	12/1/2011
Hardegree, Judith C	124 East Frenchman's Bend Road Monroe, LA 71203	12/1/2007
Jones, James H	105 East Shore Road Monroe, LA 71203	12/1/2011
McMahan, Michael P	167 Joe White Road Monroe, LA 71203	12/1/2009
Mouk, George W	109 Bayou Bend Drive Monroe, LA 71203	12/1/2009
Self, Wilmer W	9658 Highway 165 North Monroe, LA 71280	12/1/2009
Tolson, Kim M (Dr.)	113 Raymond Drive Monroe, LA 71203	12/1/2009

APPENDIX E

[\(return to Public Access\)](#)

List of Bayou DeSiard Dams and Construction Dates from North to South

<u>Name of Dam</u>	<u>Year of Construction</u>	<u>Map Key</u>
LA Hwy. 134 Dam	1931	D1
Parker's Dam on Shorty Payne Rd.	1931	D2
Monroe Fish Hatchery Dam	1931	D3
Treasure Island Rd. Dam	1960	D4
Fink's Hideaway Rd. Dam	1952	D5
Midway Dam	1930	D6
Edgewater Dam (Bonaire Drive)	1938	D7
LA Hwy. 165 Dam	1927	D8
Forsythe Dam (now a bridge)	1931	D9
Levee Dam	1935	